

IN THE CLAIMS

1-10. (Cancelled)

11. (Currently amended) A stress test method for a flash memory device having column selection transistors configured to select a predetermined bitline from among a plurality of bitlines that are coupled to flash memory cells, the stress test method comprising: activating a plurality of column selection signals to a high voltage provided directly from an external source;
applying the plurality of column selection signals to all the column selection transistors;
deactivating all the column selection signals; and
turning on selected ones of the column selection transistors in response to ~~deactivating all the column selection signals by decoding~~ a column address.

12. (Cancelled)

13. (Currently amended) The stress test method of claim 11 ~~42~~, wherein providing the high voltage directly from an external source comprises providing the high voltage with a voltage level higher than a power supply voltage.

14. (Currently amended) A stress test method for a flash memory device having column selection transistors configured to select a predetermined bitline from among a plurality of bitlines that are coupled to flash memory cells, the stress test method comprising:
activating a plurality of column selection signals to a high voltage;
applying the plurality of column selection signals to all the column selection transistors;
deactivating all the column selection signals;
turning on selected ones of the column selection transistors in response to a column address; and ~~The stress test method of claim 11, further comprising~~
applying a constant voltage to the plurality of bitlines.

15. (Original) The stress test method of claim 14, wherein applying a constant voltage to the plurality of bitlines comprises applying a ground voltage.

BEST AVAILABLE COPY

16. (Original) The stress test method of claim 11, wherein the column selection transistors are NMOS transistors.

17. (Previously presented) A flash memory device with a column predecoder, the column predecoder configured to control column selection transistors that select a predetermined bitline from among a plurality of bitlines that are coupled to flash memory cells, the column predecoder comprising:

a buffer unit configured to receive as input an all column selection signal;
decoder units configured to decode an output of the buffer unit and a column address;

and

level shifters configured to generate column selection signals that are applied to gates of the column selection transistors in response to an output of the decoder units, wherein the level shifters are configured to apply a high voltage to all the column selection transistors during a stress test in response to the all column selection signal, the level shifters including

first and second PMOS transistors each having a source, a drain, and a gate, wherein the sources of the first and second PMOS transistors are coupled to a high voltage and the gates thereof are cross-coupled to the drains thereof,

an inverter configured to invert the output of the decoder unit,

a first NMOS transistor coupled between the drain of the first PMOS transistor and a ground voltage, with a gate coupled to an output of the inverter, and

a second NMOS transistor coupled between the drain of the second PMOS transistor and the ground voltage, with a gate coupled to the output of the decoder unit, and with a drain coupled to the drain of the second PMOS transistor to generate the column selection signal.

18. (Previously presented) The flash memory device of claim 17, wherein the buffer unit comprises an inverter.

19. (Previously presented) The flash memory device of claim 17, wherein each of the decoder units comprise a NAND gate configured to receive as input the output of the buffer unit and the column address.

BEST AVAILABLE COPY

20. (Previously presented) The flash memory device of claim 17, wherein the high voltage is provided directly from an external source.
21. (Previously presented) The flash memory device of claim 17, wherein the high voltage has a voltage level higher than a power supply voltage.
22. (Previously presented) The flash memory device of claim 17, wherein a constant voltage level is applied to the bitline during the stress test.
23. (Previously presented) The flash memory device of claim 22, wherein the constant voltage level is a ground voltage level.
24. (Currently Amended) A flash memory device comprising:
a column predecoder, the column predecoder configured to control column selection transistors that select a predetermined bitline from among a plurality of bitlines that are coupled to flash memory cells, the column predecoder including
a buffer unit configured to receive as input an all column selection signal,
decoder units configured to decode an output of the buffer unit and a column address, and
level shifters configured to generate column selection signals that are applied to gates of the column selection transistors in response to an output of the decoder units, wherein the level shifters are configured to apply a high voltage to all the column selection transistors during a stress test in response to the all column selection signal; and
a column decoder, the column decoder configured to divide the column selection transistors into predetermined stages, the column decoder including
first-stage column selection transistors configured to select at least two bitlines from among the plurality of bitlines in response to a group of the column selection signals, and
second-stage column selection transistors configured to select a predetermined one of the at least two bitlines in response to another group of the column selection signals and connect the predetermined one of the at least two bitlines with a data line.
25. (Previously presented) The flash memory device of claim 24, wherein the column selection transistors are NMOS transistors.

26. (Previously presented) The flash memory device of claim 24, wherein the buffer unit comprises an inverter.
27. (Previously presented) The flash memory device of claim 24, wherein each of the decoder units comprise a NAND gate configured to receive as input the output of the buffer unit and the column address.
28. (Previously presented) The flash memory device of claim 24, wherein the high voltage is provided directly from an external source.
29. (Previously presented) The flash memory device of claim 24, wherein the high voltage has a voltage level higher than a power supply voltage.
30. (Previously presented) The flash memory device of claim 24, wherein a constant voltage level is applied to the bitline during the stress test.
31. (Previously presented) The flash memory device of claim 30, wherein the constant voltage level is a ground voltage level.